

Appl. No. 09/618,741

REMARKS/ARGUMENTS

Reconsideration and re-examination are hereby requested.

Applicant hereby respectfully requests a telephone interview with the Examiner prior to the Examiner issuing an office action. Examiner is respectfully requested to call the undersigned attorney to arrange such interview.

Applicant requests reconsideration and reexamination.

As noted by the Examiner:

As to the predetermined temperature: a continuous process inherently requires a specific constant temperature along the process - otherwise it is not continuous - it is varying. Furthermore, one would be motivated to keep the temperature (and all other parameters) essentially constant - otherwise there is a likelihood that varying parameters would result in varying product characteristics. Since Maguire teaches 1750 C - one would keep it at 1750 C and not change it.

Maguire teaches that a **two step** heat treatment is required to produce ALON powder from a mixture of alumina and carbon black, through carbo-thermal reduction. The first step occurs at 1550°C and is the conversion of the gamma alumina into a combination of alpha alumina and aluminum nitride. This step is described as requiring approximately 1 hour for full conversion. The second step occurs at 1750°C, and is the conversion of the alpha alumina and aluminum nitride into ALON. This second step is described as taking approximately 40 minutes.

Thus, while the Examiner indicates that for a continuous process the temperature should be constant, Maguire teaches that to make ALON a two-step temperature process is required. Nothing in Maguire describes or suggests making ALON with a constant temperature process and hence it is respectfully submitted that the prior art teaching away from a continuous process for making ALON.

Contrary to the teaching of the prior art, Applicants have recognized that one can produce ALON continuously since ALON can be produced in a one step temperature process by having a sufficiently high temperature and adding nitrogen while mixing the powders at such temperature. The ability to provide a one step temperature process is thus, in view of the teaching of the Maguire, unexpected. Nothing in the Maguire suggests the combination of proper temperature, mixing and adding nitrogen during the mixing and at the temperature to provide a one step temperature process. Hence, not

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only has a prima facie case of obviousness not been established, applicants unexpected result i.e., a process for producing ALON with a one-step temperature process been established in view of the prior art's teaching a two step process.

While it is true that the claim of Maguire states that the process is at a temperature is a true statement, indeed each one of the two temperatures described is "a temperature", nothing in the patent specification or claim states or suggests that the temperature is constant. It is clear that Maguire teaches a two-step, temperature process and thus teaches away from a constant temperature process which together with introduction of nitrogen during agitation at a proper temperature as taught by applicant can result in a continuous ALON process.

Examiner states that:

From MPEP 2144.04 :

E. Making Continuous

In re Dilnot, 319 F.2d 188, 138 USPQ 248 (CCPA 1963) (Claim directed to a method of producing a continuous structure wherein a stable air foam is introduced into a slurry of continuous material differed from the prior art only in requiring the addition of the foam to be continuous. The court held the claimed continuous operation would have been obvious in light of the batch process of the prior art.).

In the case of In re Dilnot, the claim is directed to producing a continuous structure where the only difference from the prior art is adding the foam continuously. Here, applicant goes against the teaching of a two-step temperature step process by having recognized that one can produce ALON continuously since ALON can be produced in a one step temperature if the powders are mixed while nitrogen is added at the proper temperature. Applicant's process is not merely adding continuously the powders; rather the Applicants have recognized that with a proper temperature and introduction of nitrogen at this proper temperature while mixing the powders, a single temperature process is possible to produce a continuous ALON process.

The Examiner then states:

As to the nitrogen being added while mixing: From MPEP 2144.04

C. Changes in Sequence of Adding Ingredients

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Rx Parte Rubin, 128 USPQ 440 (Bd. App. 1959) (Prior art reference disclosing a process of making a laminated sheet wherein a base sheet is first coated with a metallic film and thereafter impregnated with a thermosetting material was held to render prima facie obvious claims directed to a process of making a laminated sheet by reversing the order of the prior art process steps.). See also In re Burhans, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results); In re Gibson, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (Selection of any order of mixing ingredients is prima facie obvious.).

Applicant has not merely changed the order of the prior art process. As noted above, applicant goes against the teaching of a two-step temperature step process by recognizing that one can produce ALON continuously since ALON can be produced in a one step temperature if the powders are mixed while nitrogen is added at the proper temperature. Applicant's process is not merely adding continuously the powders; rather Applicants have recognized that with a proper temperature and introduction of nitrogen at this proper temperature while mixing the powders, a single temperature process is possible to enable a continuous ALON process.

The Examiner states:

Applicant's process uses the same reactants and temperatures as the prior art - and apparently the exact same final product is created. The various changes in the processing are obvious and do not warrant a granting of a patent - unless new and unexpected results are shown - via evidence. As to the alleged time savings: there is no showing that such is an unexpected result.

It is respectfully submitted that Applicant does not use "the same reactants and temperatures as the prior art". The prior art does not have a proper temperature that is held constant while powders are mixed as nitrogen is added at this proper temperature. Applicant's process is not merely adding continuously the powders; rather the recognized that with a proper temperature and introduction of nitrogen at this proper temperature while mixing the powders a single temperature process is possible to produce ALON. The process is unexpected in view of the teaching of the prior art.

The Examiner states:

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It bares repeating: Applicant's process uses the same reactants and temperatures as the prior art - and apparently the exact same final product is created. The various changes in the processing are obvious and do not warrant a granting of a patent - unless new and unexpected results are shown - via evidence. As to the alleged time savings; there is no showing that such is an unexpected result.

The statement of the Examiner is not understood since Maguire clearly teaches a two-step temperature process. It is Applicant's position that the two-step temperature process of Maguire teaches one away from a single step temperature process and hence in view of the Examiner's statement "As to the predetermined temperature: a continuous process inherently requires a specific constant" one is taught away by Maguire from producing a continuous ALON process.

In summary, as stated above, contrary to the teaching of the prior art, Applicants have recognized that ALON can be produced in a one-step temperature process by having a sufficiently high temperature, and adding nitrogen while mixing the powders at such temperature to thereby enable continuous production of ALON. The ability to provide a continuous process is thus, in view of the teaching of the Maguire, unexpected and nothing in the Maguire suggests the combination of proper temperature, mixing and adding nitrogen during the mixing and at the temperature. Hence, not only has a prima facie case of obviousness not been established, applicants unexpected result i.e., a one step temperature process for producing ALON has been established in view of the prior art's teaching a two step.

In the event any additional fee is required, please charge such amount to Patent and Trademark Office Deposit Account No. 50-3192.

February 6, 2006
Date

Respectfully submitted,



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